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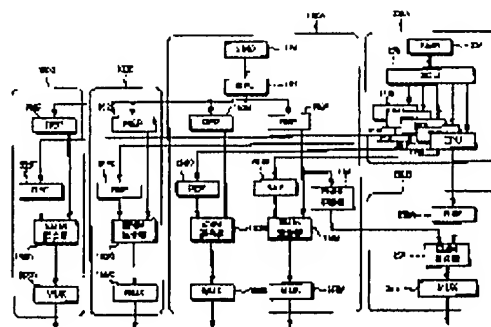
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## (54) CLIENT MANAGEMENT SYSTEM AND MANAGEMENT METHOD

### (57)Abstract:

**PROBLEM TO BE SOLVED:** To make it possible to surely receive reception contract information when an IRD is commonly used in services of plural digital satellite broadcastings.

**SOLUTION:** An EMM packet from a site 2000 of the second satellite management company is transmitted to the side of sites 100A to 100C of the first satellite management company. In the sites of the first satellite management company, the EMM packet of the first satellite management company that are repeated by repeaters 152A to 152D and the EMM packet of the second satellite management company are transmitted from the site 200 of the second satellite management company and are repeated by the first satellite operation company's repeaters 252B to 252E are mixed in EMM mixers 153A to 153D. In the site of the second satellite management company, the EMM packet of the second satellite management company that is repeated by a repeater 252A and the EMM packet of the first satellite management company that is transmitted from the second satellite management company by way of an EMM repeater 153 from the site 100A of the first satellite management company are mixed in an EMM mixer 253. Thus, even if both satellites are received, reception contract information can surely be received.



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- 3.In the drawings, any words are not translated.

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DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] It uses for this invention performing digital satellite broadcasting service, and is related with a suitable customer management system and a suitable management method.

[0002]

[Description of the Prior Art] In digital satellite broadcasting service, a digital video signal and a sound signal are compressed for example, by MPEG(Moving Picture Experts Group) 2 method, and are broadcast, while it is possible to transmit the signal of high quality compared with the existing analog broadcasting, frequency use effectiveness improves and many channelization can be attained. Moreover, in digital satellite broadcasting service, it is supposed that it is possible to serve an image, not only voice but data broadcasting, etc.

[0003] Current and the satellite for some digital satellite broadcasting services already are launched, and service of digital satellite broadcasting service is started. And in such digital satellite broadcasting service, the channel which broadcasts contents, such as a sport, a movie, music, and news, is prepared, and several 100 channels are secured as the number of channels of one satellite.

[0004] Furthermore, the satellite for some digital satellite broadcasting services is going to be launched, and service of some digital satellite broadcasting services is going to be started from now on. By such digital satellite broadcast services, it considers preparing the channel which sponsors various kinds of more interesting programs.

[0005] When receiving digital satellite broadcasting service, IRD (Integrated Receiver/Decoder) of the dedication for decoding a video signal and a sound signal is required. If some services of digital satellite broadcasting service appear, service of two or more digital satellite broadcasting services will be joined, and it will be thought that the viewers who think that he wants to enjoy digital satellite broadcasting service increase in number. However, in order to join service of different digital satellite broadcasting service, in purchasing new IRD, it is inconvenient. Then, to enable it to use IRD in common with service of each digital satellite broadcasting service is demanded.

[0006]

[Problem(s) to be Solved by the Invention] However, a configuration of IRD which can be used in common with service of two or more digital satellite broadcasting services produces the case where it becomes impossible for reception contract information to receive certainly.

[0007] That is, IRD is equipped with an IC card when receiving digital satellite broadcasting service. Card ID and contractor information (EMM) are saved at this IC card. if the satellite operating company and the contract of having managed satellite broadcasting service are made, it will be transmitted as an EMM packet from the site of that satellite operating company, and this reception contract information will be sent through the satellite which has managed that satellite operating company, and will be cut. In a receiving side, ID of the sent EMM packet which came is compared with ID of the IC card with which it is equipped, and if it is an EMM packet addressed to itself, it is incorporated. Therefore, if the reception contract of digital satellite broadcasting service is made, a viewer needs to receive the signal

from the satellite of the satellite operating company of the digital satellite broadcasting service, and needs to receive the EMM packet addressed to himself.

[0008] When the number of the satellites to receive is one, since the viewer has always received the electric wave from the satellite, he can receive certainly the EMM packet sent from the site of the satellite operating company. In spite of having made the reception contract when it enabled it to use IRD in common with service of two or more digital satellite broadcasting services, and a viewer contracted a reception contract with one satellite operating company, and the viewer had received the signal from the satellite of satellite operating company with this another, it becomes impossible however, to receive the EMM packet sent from the site of the satellite operating company. Therefore, in spite of having carried out the reception contract, reception contract information is not saved at an IC card, but the disadvantageous profit with unreceivable broadcast of the channel a contract of was made may be given to a viewer, and it can become a big problem.

[0009] Therefore, the purpose of this invention is to offer the customer management system and management method which enabled it to receive reception contract information certainly, when using IRD in common with service of two or more digital satellite broadcasting services.

[0010]

[Means for Solving the Problem] The 1st broadcast whose invention of claim 1 performs multi-channel broadcast using the 1st satellite, In the customer management system of the multi-channel broadcast which received the 2nd broadcast which performs multi-channel broadcast using the 2nd satellite by the common decoder the site of the 1st broadcast The 1st customer management tool which outputs the reception contract information of the customer of the 1st broadcast, The 1st reception contract information packet generation means which generates the reception contract information packet of the 1st broadcast from the reception contract information of the customer of the 1st broadcast, A means to transmit the reception contract information packet of the 1st broadcast to the site of the 2nd broadcast, The reception contract information packet of the 1st broadcast generated with the 1st reception contract information packet generation means, The 1st [ which has been transmitted from the site of the 2nd broadcast ] mixed means which mixes the reception contract information packet of the 2nd broadcast, The reception contract information packet of the 1st mixed broadcast and the reception contract information packet of the 2nd broadcast are included in a packet stream. The 1st transmitting means sent through the 1st satellite the site of \*\*\*\* and the 2nd broadcast The 2nd customer management tool which outputs the reception contract information of the customer of the 2nd broadcast, The 2nd reception contract information packet generation means which generates the reception contract information packet of the 2nd broadcast from the reception contract information of the customer of the 2nd broadcast, A means to transmit the reception contract information packet of the 2nd broadcast to the site of the 1st broadcast, The reception contract information packet of the 2nd broadcast generated with the 2nd reception contract information packet generation means, The 2nd [ which has been transmitted from the site of the 1st broadcast ] mixed means which mixes the reception contract information packet of the 1st broadcast, the 2nd [ which was mixed ] transmitting means which includes the reception contract information packet of the 2nd broadcast, and the reception contract information packet of the 1st broadcast in a packet stream, and is sent through the 2nd satellite -- \*\*\*\*\* -- it is the customer management system of the multi-channel broadcast characterized by making it like.

[0011] The 1st broadcast whose invention of claim 6 performs multi-channel broadcast using the 1st satellite, In the customer management system of the multi-channel broadcast which received the 2nd broadcast which performs multi-channel broadcast using the 2nd satellite by the common decoder the site of the 1st broadcast The 1st customer management tool which outputs the reception contract information of the customer of the 1st broadcast, The 1st reception contract information packet generation means which generates the reception contract information packet of the 1st broadcast from the reception contract information of the customer of the 1st broadcast, The 1st reception contract information packet detection means which receives the 2nd broadcast and decodes the reception contract information packet of the 2nd broadcast, The reception contract information packet of the 1st broadcast generated with the 1st reception contract information packet generation means, The 1st [ which was

detected with the 1st reception contract information packet detection means ] mixed means which mixes the reception contract information packet of the 2nd broadcast, The reception contract information packet of the 1st mixed broadcast and the reception contract information packet of the 2nd broadcast are included in a packet stream. The 1st transmitting means sent through the 1st satellite the site of \*\*\*\* and the 2nd broadcast The 2nd customer management tool which outputs the reception contract information of the customer of the 2nd broadcast, The 2nd packet generation means which generates the reception contract information packet of the 2nd broadcast from the reception contract information of the customer of the 2nd broadcast, The 2nd reception contract information packet detection means which receives the 1st broadcast and decodes the reception contract information packet of the 1st broadcast, The reception contract information packet of the 1st broadcast generated with the 2nd reception contract information packet generation means, The 2nd [ which was detected with the 2nd reception contract information packet detection means ] mixed means which mixes the reception contract information packet of the 1st broadcast, the 2nd [ which was mixed ] transmitting means which includes the reception contract information packet of the 2nd broadcast, and the reception contract information packet of the 1st broadcast in a packet stream, and is sent through the 2nd satellite -- \*\*\*\*\* -- it is the customer management system of the multi-channel broadcast characterized by making it like.

[0012] In the customer management method of the multi-channel broadcast which received the 1st broadcast whose invention of claim 8 performs multi-channel broadcast using the 1st satellite, and the 2nd broadcast which performs multi-channel broadcast using the 2nd satellite by the common decoder To the site of the 1st broadcast, the reception contract information of the customer of the 1st broadcast is outputted. The reception contract information packet of the 1st broadcast which generated the reception contract information packet of the 1st broadcast from the reception contract information of the customer of the 1st broadcast, transmitted to the site of the 2nd broadcast of the reception contract information packet of the 1st broadcast, and was generated, The reception contract information packet of the 2nd broadcast transmitted from the site of the 2nd broadcast is mixed. The reception contract information packet of the 1st mixed broadcast and the reception contract information packet of the 2nd broadcast are included in a packet stream. The 1st sent through the 1st satellite transmits. To the site of the 2nd broadcast Output the reception contract information of the customer of the 2nd broadcast, and the reception contract information packet of the 2nd broadcast is generated from the reception contract information of the customer of the 2nd broadcast. The reception contract information packet of the 2nd broadcast which transmitted to the site of the 1st broadcast of the reception contract information packet of the 2nd broadcast, and was generated, The reception contract information packet of the 1st broadcast transmitted from the site of the 1st broadcast is mixed. It is the customer management method of the multi-channel broadcast characterized by the mixed thing include the reception contract information packet of the 2nd broadcast, and the reception contract information packet of the 1st broadcast in a packet stream, and it was made to send through the 2nd satellite.

[0013] In the customer management method of the multi-channel broadcast which received the 1st broadcast whose invention of claim 13 performs multi-channel broadcast using the 1st satellite, and the 2nd broadcast which performs multi-channel broadcast using the 2nd satellite by the common decoder The site of the 1st broadcast outputs the reception contract information of the customer of the 1st broadcast. The reception contract information packet of the 1st broadcast which generated the reception contract information packet of the 1st broadcast from the reception contract information of the customer of the 1st broadcast, and was generated by decoding the reception contract information packet of the 2nd broadcast, and the 2nd carrying out reception contract information packet detection, The detected reception contract information packet of the 1st broadcast which mixed the reception contract information packet of the 2nd broadcast, and was mixed, and the reception contract information packet of the 2nd broadcast are included in a packet stream. The 1st satellite is minded. Delivery and the site of the 2nd broadcast Output the reception contract information of the customer of the 2nd broadcast, and the reception contract information packet of the 2nd broadcast is generated from the reception contract information of the customer of the 2nd broadcast. The reception contract information packet of the 1st broadcast which received the 1st broadcast, decoded the reception contract information packet of the 1st

broadcast, detected the 1st reception contract information packet, and was generated, The detected reception contract information packet of the 2nd broadcast which mixed the reception contract information packet of the 1st broadcast, and was mixed, and the reception contract information packet of the 1st broadcast are included in a packet stream. It is the customer management method of the multi-channel broadcast characterized by making it send through the 2nd satellite of the above.

[0014] Between the site of the 1st satellite operating company, and the site of the 2nd satellite operating company, it is exchanged in the EMM packet from the 1st satellite operating company, and the EMM packet from the 2nd satellite operating company. For this reason, a viewer can receive certainly the reception contract information currently sent from the 1st satellite operating company or the 2nd satellite operating company, also when broadcast of which satellite operating company is received.

[0015]

[Embodiment of the Invention] Hereafter, the gestalt of implementation of this invention is explained with reference to a drawing. Drawing 1 shows the outline of an example of the satellite broadcasting service system which can apply this invention.

[0016] In drawing 1, 1 is the site of the 1st satellite operating company. To the site 1 of the 1st satellite operating company, digital satellite broadcasting service of many channels is performed. 2 is the site of the 2nd satellite operating company. To the site 2 of the 2nd satellite management, digital satellite broadcasting service of many channels is performed independently with the 1st satellite operating company.

[0017] The 1st satellite operating company 1 and the 2nd satellite operating company 2 are made the same about fundamental methods, such as a compression method of a digital video signal or a digital audio signal, and a transmission format.

[0018] That is, in the 1st satellite operating company and the 2nd satellite operating company, edit processing of a broadcast image material was performed, the video signal and audio signal which were obtained from this broadcast image material were compressed with the MPEG 2 method, the QPSK (Quadrature Phase Shift Keying) modulation was carried out, and the signal is transmitted towards a satellite by the predetermined subcarrier. An MPEG 2 method compresses a video signal with DCT (Discrete Cosine Transform) and a variable-length sign.

[0019] The sending signal from the site 1 of the 1st satellite operating company is sent to the reception facility 5 of each home through the satellite 3 which the 1st satellite operating company has managed. The sending signal from the site 2 of the 2nd satellite operating company is sent to the reception facility 5 of each home through the satellite 4 which the 2nd satellite operating company has managed. The satellite 4 which the satellite 3 and the 2nd satellite operating company which the 1st satellite operating company has managed have managed is at a standstill in the location where it approached on the geostationary orbit.

[0020] As reception facility 5 of each home, the parabolic antenna 6 which receives the signal from satellites 3 and 4, and the television receiver 8 with which the video signal and video signal from IRD7 and IRD7 which restore to an input signal and decode a video signal and an audio signal are supplied are formed.

[0021] The satellite 3 which the 1st satellite operating company has managed, and the satellite 4 which the 2nd satellite operating company has managed are standing it still in the location where it approached on the geostationary orbit. And in the site 1 of the 1st satellite operating company, and the site 2 of the 2nd satellite operating company, processing is performed by the same method about fundamental methods, such as a compression method of a digital video signal or a digital audio signal, and a transmission format. For this reason, it can receive using the common parabolic antenna 6, and the signal from the satellite 3 which the 1st satellite operating company has managed, and the signal from the satellite 4 which the 2nd satellite operating company has managed can be decoded using common IRD7, and can be projected to a television receiver 8.

[0022] IRD7 is equipped with IC card 9. The reception contract information enciphered as Card ID is recorded on IC card 9.

[0023] Exchange of an EMM packet is performed by the 1st satellite operating company and the 2nd

satellite operating company by the system to which this invention was applied so that reception contract information can receive certainly. Thereby, from the site 1 of the 1st satellite operating company, the EMM packet PEMM2 of not only the EMM packet PEMM1 of the 1st satellite operating company but the 2nd satellite operating company is sent. Moreover, from the site 2 of the 2nd satellite operating company, the EMM packet PEMM1 of not only the EMM packet PEMM2 of the 2nd satellite operating company but the 1st satellite operating company is sent.

[0024] That is, drawing 2 A shows the case where IRD7 is equipped with IC card 9A which the 1st satellite operating company published. In this case, when the viewer has received the broadcast from the satellite 3 of the 1st satellite operating company, the EMM packet PEMM1 of the 1st satellite operating company sent from the site 1 of the 1st satellite operating company is received by IRD7 through a satellite 3, and this contractor information is recorded on IC card 9A. When the viewer has received the broadcast from the satellite 4 of the 2nd satellite operating company, the EMM packet PEMM1 of the 1st satellite operating company sent from the site 2 of the 2nd satellite operating company is received by IRD7 through a satellite 4, and this contractor information is recorded on IC card 9A.

[0025] Drawing 2 B shows the case where IRD7 is equipped with IC card 9B which the 2nd satellite operating company published. In this case, when having received the broadcast from the satellite 4 of the 2nd satellite operating company, the EMM packet PEMM2 of the 2nd satellite operating company sent from the site 2 of the 2nd satellite operating company is received by IRD7 through a satellite 4, and this contractor information is recorded on IC card 9B. When having received the satellite broadcasting service from the satellite 3 of the 1st satellite operating company, the EMM packet PEMM2 of the 2nd satellite operating company sent from the site 3 of the 1st satellite operating company is received by IRD7 through a satellite 3, and this contractor information is recorded on IC card 9B.

[0026] Drawing 3 shows the outline of the broadcast equipment for performing multi-channel digital broadcast in the above-mentioned site 1 and above-mentioned site 2 of a system. This multi-channel digital broadcast equipment is with the 1st satellite operating company and the 2nd satellite operating company, and the same thing is used fundamentally.

[0027] This digital broadcast equipment has the broadcast programming system (BPDS) 21, the baseband system (BASEBAND) 22, the central processing system 23, the customer management system (SMS) 24, the customer viewing-and-listening authorization system (SAS) 25, the IF system 26, and the shared bus system 27.

[0028] The broadcast programming system (BPDS) 21 performs registration of a broadcast image material, and organization of management and an image program. This broadcast programming system (BPDS) 21 consists of M systems from #1 to #M.

[0029] The base BAIDO system (BASEBAND) 22 is performing sending out of the image material by the acceptance, cart, and server of an image material by which a circuit input is carried out, switching of the material by the master switcher, etc., and has baseband C-system (BCS) 31 and router C-system (RCC) 32.

[0030] The central processing unit 23 has the network management database (NMD) 33, the program guide system (PGS) 34, encoder C-system (ECS) 35, multiplexer C-system (MCS) 36, the EPG (electronic program guide) flow control (EPG-FC) 37, the encoder (ENC) 38, the multiplexer (MUX) 39, and the download server (DLS) 40.

[0031] The network management database (NMD) 33 distributes CA information as which only a specific viewer can regard all the information that inputted a setup of a broadcast system and was inputted by the broadcast programming system (BPDS) 21, and the information about a schedule, configuration information which is the common information on a system.

[0032] The program guide system (PGS) 34 generates the EPG sending-out data of the service sent out by one transponder, and a schedule control file.

[0033] A multiplexer (MUX) 39 is serial in video, an audio packet, etc. which were multiplexed one dimension, and generates reception and an internal packet. Furthermore, the EMC packet of a program unit is generated. These videos, an audio packet, and all control packets required for broadcast system control are multiplexed, and are outputted as one stream.



[0034] The customer management system (SMS) 24 is performing customer management of customer registration, tariff listening to charged broadcast, etc. The customer management system (SMS) 24 has managed whether it is the contract of receiving which channel, for every customer, and sends out reception contract information (EMM) based on this contract. Moreover, this customer management system (SMS) 24 is performing accounting management of charged broadcast.

[0035] The customer viewing-and-listening authorization system (SAS) 25 enciphers reception and this reception contract information for the reception contract information (EMM) from a customer management system (SMS) 24 by encryption algorithm, and sends out an EMM packet.

[0036] The IF system 26 has the QPSK modulation (QPSK) section 41 and the IF switcher (IFSW) 42. It is sent to the IF system 26, a QPSK modulation is carried out in IF system section 26, and the packet to send out is changed into predetermined carrier frequency. Power amplification of the output of this IF system section 26 is supplied and carried out to an output amplifier 27. And this signal is outputted from a parabolic antenna 28, and is transmitted towards a satellite 3 or a satellite 4.

[0037] A shared bus system 27 is equipped with the alarm for indicating the system alarm by detection and a monitor system (AMS) 43, and the network 44 that performs backbone of a system.

[0038] Drawing 4 shows the configuration of IRD7 of each home. In drawing 4, a satellite 3 or the signal from 4 is received by the parabolic antenna 6. LNB (Low Noise Block Downconverter) 51 is attached in a parabolic antenna 6. The down convert of the input signal is carried out by LNB51.

[0039] The output of LNB51 is supplied to the front end section 52. The front end section 52 has the carrier selection section 53, the QPSK recovery section 54, and the FEC decoder section 54.

[0040] A frequency setting signal is supplied to the carrier selection section 53 from a host processor 50. This frequency setting signal is generated based on the channel setting signal from a viewer given to the input section 70. The carrier selection section 53 of the front end section 52 is controlled by the frequency setting signal from this host processor 50, and the signal of predetermined received frequency is chosen by it.

[0041] The output of the carrier selection section 53 is supplied to the QPSK recovery section 54. The QPSK recovery section 54 carries out the QPSK recovery of the input signal chosen by the carrier selection section 53.

[0042] The output of the QPSK recovery section 54 is supplied to the FEC decoder section 55. Error correction processing etc. is performed in the FEC decoder section 55. The output of this FEC decoder section 55 is sent to the transport section 57.

[0043] The transport section 57 has the demultiplexer 59 with the descrambler 58. A descrambler 58 cancels this scramble, when the receiving program is scrambled. A demultiplexer 59 distributes a video packet, an audio packet, an EPG packet, etc. from a packet stream.

[0044] When the program of the Sir pith (channel) ordered reception from the viewer is scrambled, a host processor 50 reads the information memorized by IC card 9, and controls the descrambler 58 of the transport section 57 corresponding to the information. Namely, when access is permitted, a descrambler 58 descrambles the packet currently scrambled from the FEC decoder 55, and outputs it to a demultiplexer 59. When access is not permitted, a host processor 50 does not make a descrambler 58 perform processing of a differential-gear clan bull. Consequently, a viewer can view and listen to the program a contract of is not made substantially.

[0045] A video packet, an audio packet, and an EPG packet are separated by the demultiplexer 59. A video packet is sent to the video decoder 60, an audio packet is sent to the audio decoder 61, and an EPG packet is sent to the EPG processing processor 62.

[0046] the video data into which the video decoder 60 was inputted -- an MPEG 2 method -- decoding -- a luminance signal Y and a color-difference signal (R-Y) -- and (B-Y) -- from -- the becoming component video signal is formed. This component video signal is supplied to the NTSC encoder 64. the NTSC encoder 64 -- a luminance signal Y and a color-difference signal (R-Y) -- and (B-Y) -- from -- the becoming component video signal is changed into the composite video signal of NTSC system. The video signal of this NTSC system is outputted from an output terminal 66.

[0047] The audio decoder 61 decodes the inputted audio data by the MPEG 2 method, and forms a PCM



audio signal. This PCM audio signal is supplied to the D/A transducer 65. A PCM audio signal is changed into an analog audio signal by the D/A transducer 65. This analog audio signal is outputted from an output terminal 67.

[0048] The EPG processing processor 62 generates the data for indicating by onscreen one, and outputs them to the NTSC encoder 64 while it supplies EPG data to a host processor 50 corresponding to the command from a host processor 50. Thereby, it projects an electronic program on a screen.

[0049] Moreover, the output of a host processor 50 is supplied to a display 69. Various kinds of displays are performed to this display 69. Moreover, a modem 68 is connected to a host processor 50. The viewing-and-listening hysteresis of PPV (Pay Per View) is saved at IC card 9, and is sent to the customer management system (SMS) of each satellite operating company through a modem 66 for every predetermined period.

[0050] By the way, as mentioned above, in the satellite broadcasting service receiving system which can apply this invention, from the satellite 3 of the 1st satellite operating company, and the satellite 4 of the 2nd satellite operating company, the signal of digital satellite broadcasting service is sent and also let the signal from which satellite be ability ready for receiving. Since it is such a gestalt, when one satellite operating company and reception contract are sent in reception contract information from the site of an epilogue and one satellite operating company and the signal of the satellite of the satellite operating company of another side is received, reception contract information can be received.

[0051] So, by the system to which this invention was applied, it is made to exchange an EMM packet by the 1st satellite operating company and the 2nd satellite operating company. Thereby, also when broadcast of which satellite operating company is received, reception contract information can be received certainly.

[0052] Hereafter, the exchange of an EMM packet performed by the 1st satellite operating company and the 2nd satellite operating company is explained in full detail.

[0053] In drawing 5, the 1st satellite operating company has three sites 100A, 100B, and 100C where installations differ. These sites 100A-100C are equivalent to the site 1 in drawing 1. A customer management system (SMS) 124 is in site 100A. This customer management system (SMS) 124 is equivalent to the customer management system (SMS) 24 in drawing 3.

[0054] From the customer management system (SMS) 124 of the 1st satellite operating company, reception contract information EMM1 on the 1st satellite operating company is published. The subscriber information EMM1 on this 1st satellite operating company is sent to the EMM process unit (EPU) 151.

[0055] The EMM process unit (EPU) 151 enciphers the contractor information EMM1 on this 1st satellite operating company, and forms the EMM packet PEMM1 of the 1st satellite operating company. This EMM process unit (EPU) 151 is contained in the customer viewing-and-listening system (SAS) 25 in drawing 3. The EMM packet PEMM1 of the 1st satellite operating company from this EMM process unit (EPU) 151 is sent to Repeaters 152A, 152B, 152C, and 152D.

[0056] In addition, Repeaters 152A and 152B are in site 100A, repeater 152C has them in site 100B, and repeater 152D is in site 100C. These repeaters 152A-152D transmit the EMM packet PEMM1 of the 1st satellite operating company repeatedly if needed two or more times, and are contained in the customer viewing-and-listening system (SAS) 25 in drawing 3.

[0057] The output of the repeaters 152A and 152B of site 100A is supplied to the EMM mixers 153A and 153B in site 100A, respectively. The output of repeater 152C of site 100B is supplied to EMM mixer 153C in site 100B. The output of repeater 152D of site 100C is supplied to EMM mixer 153D in site 100C. Moreover, the EMM repeater 154 is formed in site 100A, and the output of repeater 152A is sent to a 2nd satellite operating-company side through the EMM repeater 154.

[0058] The 2nd satellite operating company is in the location which transmitting Administration Bureau 200A and site 200B left. This transmitting Administration Bureau 200A and site 200B support the site 2 in drawing 1. A customer management system (SMS) 224 is in transmitting Administration Bureau 200A. This customer management system (SMS) 224 is equivalent to the customer management system (SMS) 24 in drawing 3.

[0059] From the customer management system (SMS) 224 of the 2nd satellite operating company, reception contract information EMM2 on the 2nd satellite operating company is published. The reception contract information EMM2 on this 2nd satellite operating company is sent to the SMS distribution unit (SDU) 250. In the SMS distribution unit (SDU) 250, the subscriber information EMM2 on the 2nd satellite operating company from the customer management system (SMS) 224 of the 2nd satellite operating company can distribute.

[0060] The output of the SMS distribution unit (SDU) 250 is sent to two or more EMM process units (EPU) 251A, 251B, 251C, 251D, and 251E. The EMM process units (EPU) 251A-251E encipher the reception contract information EMM2 on this 2nd satellite operating company, and form the EMM packet EMM2 of the 2nd satellite operating company. The EMM process units (EPU) 251A-251D are contained in the customer viewing-and-listening system (SAS) 25 in drawing 3.

[0061] Repeater 252A for repeating and sending out the EMM packet PEMM2 is prepared in site 200B of the 2nd satellite operating company. moreover, to site 100A of the 1st satellite operating company The repeaters 252B and 252C for repeating and sending out the EMM packet PEMM2 of the 2nd satellite operating company are formed. To site 100B of the 1st satellite operating company Repeater 252D for repeating and sending out the EMM packet PEMM2 of the 2nd satellite operating company is prepared, and repeater 252E for repeating and sending out the EMM packet PEMM2 of the 2nd satellite operating company is prepared in site 100C of the 1st satellite operating company.

[0062] The output of EMM process-unit (EPU) 251A of the 2nd satellite operating company is sent to repeater 252A in site 200B of the 1st satellite operating company. Moreover, the output of the EMM process units (EPU) 251B, 251C, 251D, and 251E is supplied to the repeaters 252B, 252C, 252D, and 252E in the sites 100A-100C of the 1st satellite operating company, respectively.

[0063] The EMM packet PEMM2 of the 2nd satellite operating company from Repeaters 252B, 252C, 252D, and 252E is supplied to the EMM mixers 153A, 153B, 153C, and 153D, respectively. The EMM packet PEMM1 of the 1st satellite operating company is supplied to the EMM mixers 153A, 153B, 153C, and 153D from Repeaters 152A, 152B, 152C, and 152D. By these EMM(s) mixers 151A-151D, the EMM packet PEMM1 of the 1st satellite operating company and the EMM packet PEMM2 of the 2nd satellite operating company are mixed.

[0064] The output of the EMM mixers 153A, 153B, 153C, and 153D is supplied to Multiplexers 155A, 155B, 155C, and 151D. Multiplexers 155A-155D incorporate an EMM packet on a packet stream, and support the multiplexer (MUX) 39 in drawing 3. Thus, it is mixed and the EMM packet EMM1 of the 1st satellite operating company and the EMM packet EMM2 of the 2nd satellite operating company are transmitted from each sites 100A, 100B, and 100C of the 1st satellite operating company.

[0065] Moreover, the output of EMM process-unit (EPU) 251A of the 2nd satellite operating company is sent to repeater 252A in site 200B of the 2nd satellite operating company. The EMM packet PEMM2 of the 2nd satellite operating company from this repeater 252A is sent to the EMM mixer 253.

[0066] The EMM packet PEMM1 of the 1st satellite operating company is supplied to the EMM mixer 253 through the EMM repeater 154. By the EMM mixer 253, the EMM packet PEMM2 of the 2nd satellite operating company and the EMM packet PEMM1 of the 1st satellite operating company are mixed.

[0067] The output of the EMM mixer 253 is supplied to a multiplexer 255. A multiplexer 255 incorporates an EMM packet on a packet stream, and supports the multiplexer (MUX) 39 in drawing 3. Thus, it is mixed and the EMM packet PEMM2 of the 2nd satellite operating company and the EMM packet PEMM1 of the 1st satellite operating company are transmitted from each site 200B of the 2nd satellite operating company.

[0068] Thus, in the system to which this invention was applied, while the repeaters 252B-252E of the EMM packet PEMM2 of the 2nd satellite operating company are formed in the site of the 1st satellite operating company, the EMM mixers 153A-153D which mix the EMM packet PEMM1 of the 1st satellite \*\*\*\*\* and the EMM packet PEMM2 of the 2nd satellite operating company are formed. Moreover, the EMM repeater 154 for sending the EMM packet of the 1st satellite operating company to the site of the 2nd satellite operating company is formed in the site of the 1st satellite operating

company. The EMM mixer 253 which mixes the EMM packet PEMM1 of the satellite operating company of EMM packet PEMM2J1st of the 2nd satellite operating company is formed in the site of the 2nd satellite operating company.

[0069] By this from the site of the 1st satellite operating company The EMM packet PEMM2 of not only the EMM packet PEMM1 of the 1st satellite operating company but the 2nd satellite operating company is outputted. From the site of the 2nd satellite operating company Not only the EMM packet PEMM2 of the 2nd satellite operating company but when the EMM packet PEMM1 of the 1st satellite operating company comes to be outputted and it has received which satellite, an EMM packet can be received certainly.

[0070] In addition, it may be made to send an EMM packet to the site of the satellite operating company of the other party in the phase before minding a repeater, and after minding a ball race, you may make it send an EMM packet to the site of the satellite operating company of the other party as mentioned above, when exchanging an EMM packet between the site of the 1st satellite operating company, and the site of the 2nd satellite operating company. When the amount of data is taken into consideration, it is desirable to send an EMM packet to the site of the satellite operating company of the other party in the phase before minding a repeater. When an EMM packet is sent to the site of the satellite operating company of the other party in the phase before minding a repeater, the repeater [ REPITO / repeater / this EMM packet ] is needed for the satellite operating-company side of the other party.

[0071] Of course, when an EMM packet is exchanged between the site of the 1st satellite operating company, and the site of the 2nd satellite operating company, The both sides of transmission of the EMM packet from a site to the site of the 2nd satellite operating company of the 1st satellite operating company and transmission of the EMM packet from a site to the site of the 2nd satellite operating company of the 1st satellite operating company May make it send an EMM packet to the site of the satellite operating company of the other party in the phase before minding a repeater, and one side An EMM packet to the site of the satellite operating company of the other party in the phase before minding a repeater delivery and another side You may make it send an EMM packet to the site of the satellite operating company of the other party in the phase after minding a repeater, and both sides may be made to send an EMM packet to the site of the satellite operating company of the other party in the phase after minding a repeater further.

[0072] Although the site of the 1st satellite operating company and the site of the 2nd satellite operating company are connected with a cable and the EMM packet is exchanged in the above-mentioned example, the EMM packet sent through a satellite is received and it may be made to exchange an EMM packet.

[0073] Drawing 6 is the example which receives the EMM packet sent through a satellite and exchanged the EMM packet. In the above-mentioned example, repeater 252B of the site of the site of 2nd satellite operating company to 1st satellite operating company, As opposed to 252C, 252D, and 252E directly the EMM packet PEMM2 Delivery and the EMM packet PEMM2 of this 2nd satellite operating company, Although he was trying to mix the EMM packet PEMM1 of the 1st satellite operating company with the EMM mixers 153A, 153B, 153C, and 153D In this example, Dummy 301A, 301B, 301C, and IRD 301D is formed in the preceding paragraph of Repeaters 252B, 252C, 252D, and 252E. And the EMM packet PEMM2 of the 2nd satellite operating company sent through a satellite 4 from the 2nd satellite operating company with these dummies 301A, 301B, 301C, and IRD 301D is received. The EMM packet PEMM2 of this 2nd received satellite operating company is supplied to Repeaters 252B, 252C, 252D, and 252E. And the EMM packet PEMM1 of the 1st satellite operating company and the EMM packet PEMM2 of the 2nd satellite operating company are mixed with the EMM mixers 153A, 153B, 153C, and 153D.

[0074] Moreover, although the EMM packet PEMM1 of the 1st satellite operating company was sent to the site of the 2nd satellite operating company through the EMM repeater 154 in the example in drawing 4 at the 2nd operating-company side from the site of the 1st satellite operating company, a dummy IRD401 is formed in the preceding paragraph of the repeater 253 of the site of the 2nd satellite operating company in this example. And the EMM packet PEMM1 of the 1st satellite operating company sent through a satellite 3 with a dummy IRD401 from the 1st satellite operating company is received. The

EMM packet PEMM1 of this 1st received satellite operating company is supplied to a repeater 253. And the EMM packet EMM1 of the 1st satellite operating company and the EMM packet EMM2 of the 2nd satellite operating company are mixed by the multiplexer 255.

[0075]

[Effect of the Invention] According to this invention, it is exchanged in the EMM packet from the 1st satellite operating company, and the EMM packet from the 2nd satellite operating company between the site of the 1st satellite operating company, and the site of the 2nd satellite operating company. For this reason, a viewer can receive certainly the reception contract information currently sent from the 1st satellite operating company or the 2nd satellite operating company, also when broadcast of which satellite operating company is received.

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[Translation done.]

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2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

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CLAIMS

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[Claim(s)]

[Claim 1] In the customer management system of the multi-channel broadcast which received the 1st broadcast which performs multi-channel broadcast using the 1st satellite, and the 2nd broadcast which performs multi-channel broadcast using the 2nd satellite by the common decoder The 1st customer management tool with which the site of broadcast of the above 1st outputs the reception contract information of the customer of broadcast of the above 1st, The 1st reception contract information packet generation means which generates the reception contract information packet of the 1st broadcast from the reception contract information of the customer of broadcast of the above 1st, A means to transmit the reception contract information packet of broadcast of the above 1st to the site of the 2nd broadcast, The reception contract information packet of broadcast of the above 1st generated with the reception contract information packet generation means of the above 1st, The 1st mixed means which mixes the reception contract information packet of broadcast of the above 2nd transmitted from the site of broadcast of the above 2nd, The reception contract information packet of broadcast of the above 1st and the reception contract information packet of broadcast of the above 2nd which were mixed are included in a packet stream. The site of broadcast of the 1st transmitting means sent through the 1st satellite of the above of \*\*\*\* and the above 2nd The 2nd customer management tool which outputs the reception contract information of the customer of broadcast of the above 2nd, The 2nd reception contract information packet generation means which generates the reception contract information packet of the 2nd broadcast from the reception contract information of the customer of broadcast of the above 2nd, A means to transmit the reception contract information packet of broadcast of the above 2nd to the site of the 1st broadcast, The reception contract information packet of broadcast of the above 2nd generated with the reception contract information packet generation means of the above 2nd, The 2nd mixed means which mixes the reception contract information packet of broadcast of the above 1st transmitted from the site of broadcast of the above 1st, the 2nd transmitting means which includes the reception contract information packet of broadcast of the above 2nd and the reception contract information packet of broadcast of the above 1st which were mixed in a packet stream, and is sent through the 2nd satellite of the above -- \*\*\*\*\* -- the customer management system of the multi-channel broadcast characterized by making it like.

[Claim 2] While REPITO [ the site of broadcast of the above 1st / the reception contract information packet of the 1st broadcast from the reception contract information packet generation means of the above 1st ] The site of broadcast of delivery and the above 2nd to the site of broadcast of the reception contract information packet of broadcast of the above 1st before [ above ] REPITO is carried out of the above 2nd While REPITO [ the reception contract information packet of broadcast of the above 2nd from the reception contract information packet generation means of the above 2nd ] The reception contract information packet of broadcast of the above 2nd before [ above ] REPITO is carried out is sent to the site of broadcast of the above 1st. Further in the site of broadcast of the above 1st A means, REPITO [ the reception contract information packet of broadcast of the transmitted above 2nd ], is established. In the site of broadcast of the above 2nd Establish a means, REPITO [ the reception contract

information packet of broadcast of the transmitted above 1st ], and it sets to the site of broadcast of the above 1st. The reception contract information packet of broadcast of the above 1st by which REPITO was carried out [ above-mentioned ] to the site of broadcast of the above 1st, Mix the reception contract information packet of broadcast of the above [ REPITO / was sent from the site of broadcast of the above 2nd and / above / in the site of broadcast of the above 1st ] 2nd, and it sets to the site of broadcast of the above 2nd. The reception contract information packet of broadcast of the above 2nd by which REPITO was carried out [ above-mentioned ] to the site of broadcast of the above 2nd, The customer management system of the multi-channel broadcast according to claim 1 characterized by mixing the reception contract information packet of broadcast of the above [ REPITO / was sent from the site of broadcast of the above 1st and / above / in the site of broadcast of the above 2nd ] 1st.

[Claim 3] While REPITO [ the site of broadcast of the above 1st / the reception contract information packet of the 1st broadcast from the reception contract information packet generation means of the above 1st ] The site of broadcast of delivery and the above 2nd to the site of broadcast of the reception contract information packet of broadcast of the above 1st after REPITO was carried out [ above-mentioned ] of the above 2nd While REPITO [ the reception contract information packet of broadcast of the above 2nd from the reception contract information packet generation means of the above 1st ] The reception contract information packet of broadcast of the above 2nd before [ above ] REPITO is carried out is sent to the site of broadcast of the above 1st. Further in the site of broadcast of the above 1st Establish a means, REPITO [ the reception contract information packet of broadcast of the transmitted above 2nd ], and it sets to the site of broadcast of the above 1st. The reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 1st ] 1st, Mix the reception contract information packet of broadcast of the above [ REPITO / was sent from the site of broadcast of the above 2nd and / above / in the site of broadcast of the above 1st ] 2nd, and it sets to the site of broadcast of the above 2nd. The reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 2nd ] 2nd, The customer management system of the multi-channel broadcast according to claim 1 characterized by mixing the reception contract information packet of broadcast of the above 1st which are REPITO in the site of broadcast of the above 1st and has been sent from the site of broadcast of the above 1st.

[Claim 4] While REPITO [ the site of broadcast of the above 1st / the reception contract information packet of the 1st broadcast from the reception contract information packet generation means of the above 1st ] The site of broadcast of delivery and the above 2nd to the site of broadcast of the reception contract information packet of broadcast of the above 1st before [ above ] REPITO is carried out of the above 2nd While REPITO [ the reception contract information packet of broadcast of the above 2nd from the reception contract information packet generation means of the above 1st ] The reception contract information packet of broadcast of the above 2nd after REPITO was carried out [ above-mentioned ] is sent to the site of broadcast of the above 1st. Further in the site of broadcast of the above 2nd Establish a means, REPITO [ the reception contract information packet of broadcast of the transmitted above 1st ], and it sets to the site of broadcast of the above 1st. The reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 1st ] 1st, Mix the reception contract information packet of broadcast of the above 2nd which are REPITO in the site of broadcast of the above 2nd and has been sent from the site of broadcast of the above 2nd, and it sets to the site of broadcast of the above 2nd. The reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 2nd ] 2nd, The customer management system of the multi-channel broadcast according to claim 1 characterized by mixing the reception contract information packet of broadcast of the above [ REPITO / was sent from the site of broadcast of the above 1st and / above / in the site of broadcast of the above 2nd ] 1st.

[Claim 5] While REPITO [ the site of broadcast of the above 1st / the reception contract information packet of the 1st broadcast from the reception contract information packet generation means of the above 1st ] The site of broadcast of delivery and the above 2nd to the site of broadcast of the reception contract information packet of broadcast of the above 1st after REPITO was carried out [ above-mentioned ] of the above 2nd While REPITO [ the reception contract information packet of broadcast of



the above 2nd from the reception contract information packet generation means of the above 1st ] In the site of broadcast of delivery and the above 1st to the site of broadcast of the reception contract information packet of broadcast of the above 2nd after REPITO was carried out [ above-mentioned ] of the above 1st The reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 1st ] 1st, Mix the reception contract information packet of broadcast of the above 2nd which are REPITO in the site of broadcast of the above 2nd and has been sent from the site of broadcast of the above 2nd, and it sets to the site of broadcast of the above 2nd. The reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 2nd ] 2nd, The customer management system of the multi-channel broadcast according to claim 1 characterized by mixing the reception contract information packet of broadcast of the above 1st which are REPITO in the site of broadcast of the above 1st and has been sent from the site of broadcast of the above 1st.

[Claim 6] In the customer management system of the multi-channel broadcast which received the 1st broadcast which performs multi-channel broadcast using the 1st satellite, and the 2nd broadcast which performs multi-channel broadcast using the 2nd satellite by the common decoder The 1st customer management tool with which the site of broadcast of the above 1st outputs the reception contract information of the customer of broadcast of the above 1st, The 1st reception contract information packet generation means which generates the reception contract information packet of the 1st broadcast from the reception contract information of the customer of broadcast of the above 1st, The 1st-reception contract information packet detection means which receives the 2nd above-mentioned broadcast and decodes the reception contract information packet of broadcast of the above 2nd, The reception contract information packet of broadcast of the above 1st generated with the reception contract information packet generation means of the above 1st, The 1st mixed means which mixes the reception contract information packet of broadcast of the above 2nd detected with the reception contract information packet detection means of the above 1st, The reception contract information packet of broadcast of the above 1st and the reception contract information packet of broadcast of the above 2nd which were mixed are included in a packet stream. The site of broadcast of the 1st transmitting means sent through the 1st satellite of the above of \*\*\*\* and the above 2nd The 2nd customer management tool which outputs the reception contract information of the customer of broadcast of the above 2nd, The 2nd packet generation means which generates the reception contract information packet of the 2nd broadcast from the reception contract information of the customer of broadcast of the above 2nd, The 2nd reception contract information packet detection means which receives the 1st above-mentioned broadcast and decodes the reception contract information packet of broadcast of the above 1st, The reception contract information packet of broadcast of the above 1st generated with the reception contract information packet generation means of the above 2nd, The 2nd mixed means which mixes the reception contract information packet of broadcast of the above 1st detected with the reception contract information packet detection means of the above 2nd, the 2nd transmitting means which includes the reception contract information packet of broadcast of the above 2nd and the reception contract information packet of broadcast of the above 1st which were mixed in a packet stream, and is sent through the 2nd satellite of the above -- \*\*\*\*\* -- the customer management system of the multi-channel broadcast characterized by making it like.

[Claim 7] While REPITO [ the site of broadcast of the above 1st / the reception contract information packet of the 1st broadcast from the reception contract information packet generation means of the above 1st ] REPITO [ the reception contract information packet of broadcast of the above 2nd detected with the reception contract information packet detection means of the above 1st ] the site of broadcast of the above 2nd While REPITO [ the reception contract information packet of the 2nd broadcast from the reception contract information packet generation means of the above 2nd ] The reception contract information packet of broadcast of the above 1st detected with the reception contract information packet detection means of the above 2nd, and it sets to the site of broadcast of the above 1st. The reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 1st ] 1st, Mix the reception contract information packet of broadcast of the above [ REPITO / was detected by the reception contract information packet detection means of the above 1st, and / above / in



the site of broadcast of the above 1st ] 2nd, and it sets to the site of broadcast of the above 2nd. The reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 2nd ] 2nd, The customer management system of the multi-channel broadcast according to claim 6 characterized by mixing the reception contract information packet of broadcast of the above [ REPITO / was detected by the reception contract information packet detection means of the above 2nd, and / above / in the site of broadcast of the above 2nd ] 1st.

[Claim 8] In the customer management method of the multi-channel broadcast which received the 1st broadcast which performs multi-channel broadcast using the 1st satellite, and the 2nd broadcast which performs multi-channel broadcast using the 2nd satellite by the common decoder To the site of broadcast of the above 1st, the reception contract information of the customer of broadcast of the above 1st is outputted. The reception contract information packet of broadcast of the above 1st by which generated the reception contract information packet of the 1st broadcast from the reception contract information of the customer of broadcast of the above 1st, and transmitted the reception contract information packet of broadcast of the above 1st to the site of the 2nd broadcast, and generation was carried out [ above-mentioned ], The reception contract information packet of broadcast of the above 2nd transmitted from the site of broadcast of the above 2nd is mixed. The reception contract information packet of broadcast of the above 1st and the reception contract information packet of broadcast of the above 2nd which were mixed are included in a packet stream. The 1st sent through the 1st satellite of the above transmits. To the site of broadcast of the above 2nd Output the reception contract information of the customer of broadcast of the above 2nd, and the reception contract information packet of the 2nd broadcast is generated from the reception contract information of the customer of broadcast of the above 2nd. The reception contract information packet of broadcast of the above 2nd by which transmitted the reception contract information packet of broadcast of the above 2nd to the site of the 1st broadcast, and generation was carried out [ above-mentioned ], The reception contract information packet of broadcast of the above 1st transmitted from the site of broadcast of the above 1st is mixed. The customer management method of the multi-channel broadcast characterized by including the reception contract information packet of broadcast of the above 2nd and the reception contract information packet of broadcast of the above 1st which were mixed in a packet stream, and making it send through the 2nd satellite of the above.

[Claim 9] While REPITO [ the site of broadcast of the above 1st / the reception contract information packet of broadcast of the above 1st ] The site of broadcast of delivery and the above 2nd to the site of broadcast of the reception contract information packet of broadcast of the above 1st before [ above ] REPITO is carried out of the above 2nd In the site of broadcast of delivery and the above 1st to the site of broadcast of the reception contract information packet of broadcast of the above 2nd while REPITO [ the reception contract information packet of broadcast of the above 2nd ], before above-mentioned REPITO is carried out of the above 1st The reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 1st ] 1st, Mix the reception contract information packet of broadcast of the above [ REPITO / was sent from the site of broadcast of the above 2nd and / above / in the site of broadcast of the above 1st ] 2nd, and it sets to the site of broadcast of the above 2nd. The reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 2nd ] 2nd, The customer management method of the multi-channel broadcast according to claim 8 characterized by mixing the reception contract information packet of broadcast of the above [ REPITO / was sent from the site of broadcast of the above 1st and / above / in the site of broadcast of the above 2nd ] 1st.

[Claim 10] While REPITO [ the site of broadcast of the above 1st / the reception contract information packet of broadcast of the above 1st ] The site of broadcast of delivery and the above 2nd to the site of broadcast of the reception contract information packet of broadcast of the above 1st after REPITO was carried out [ above-mentioned ] of the above 2nd In the site of broadcast of delivery and the above 1st to the site of broadcast of the reception contract information packet of broadcast of the above 2nd while REPITO [ the reception contract information packet of broadcast of the above 2nd ], before above-mentioned REPITO is carried out of the above 1st The reception contract information packet of

broadcast of the above [ REPITO / above / in the site of broadcast of the above 1st ] 1st, Mix the reception contract information packet of broadcast of the above [ REPITO / was sent from the site of broadcast of the above 2nd and / above / in the site of broadcast of the above 1st ] 2nd, and it sets to the site of broadcast of the above 2nd. The reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 2nd ] 2nd, The customer management method of the multi-channel broadcast according to claim 8 characterized by mixing the reception contract information packet of broadcast of the above 1st which are REPITO in the site of broadcast of the above 1st and has been sent from the site of broadcast of the above 1st.

[Claim 11] While REPITO [ the site of broadcast of the above 1st / the reception contract information packet of broadcast of the above 1st ] The site of broadcast of delivery and the above 2nd to the site of broadcast of the reception contract information packet of broadcast of the above 1st before [ above ] REPITO is carried out of the above 2nd In the site of broadcast of delivery and the above 1st to the site of broadcast of the reception contract information packet of broadcast of the above 2nd while REPITO [ the reception contract information packet of broadcast of the above 2nd ], after REPITO was carried out [ above-mentioned ] of the above 1st The reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 1st ] 1st, Mix the reception contract information packet of broadcast of the above 2nd which are REPITO in the site of broadcast of the above 2nd and has been sent from the site of broadcast of the above 2nd, and it sets to the site of broadcast of the above 2nd. The reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 2nd ] 2nd, The customer management method of the multi-channel broadcast according to claim 8 characterized by mixing the reception contract information packet of broadcast of the above [ REPITO / was sent from the site of broadcast of the above 1st and / above / in the site of broadcast of the above 2nd ] 1st.

[Claim 12] While REPITO [ the site of broadcast of the above 1st / the reception contract information packet of broadcast of the above 1st ] The site of broadcast of delivery and the above 2nd to the site of broadcast of the reception contract information packet of broadcast of the above 1st after REPITO was carried out [ above-mentioned ] of the above 2nd In the site of broadcast of delivery and the above 1st to the site of broadcast of the reception contract information packet of broadcast of the above 2nd while REPITO [ the reception contract information packet of broadcast of the above 2nd ], after REPITO was carried out [ above-mentioned ] of the above 1st The reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 1st ] 1st, Mix the reception contract information packet of broadcast of the above 2nd which are REPITO in the site of broadcast of the above 2nd and has been sent from the site of broadcast of the above 2nd, and it sets to the site of broadcast of the above 2nd. The reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 2nd ] 2nd, The customer management method of the multi-channel broadcast according to claim 8 characterized by mixing the reception contract information packet of broadcast of the above 1st which are REPITO in the site of broadcast of the above 1st and has been sent from the site of broadcast of the above 1st.

[Claim 13] In the customer management method of the multi-channel broadcast which received the 1st broadcast which performs multi-channel broadcast using the 1st satellite, and the 2nd broadcast which performs multi-channel broadcast using the 2nd satellite by the common decoder The site of broadcast of the above 1st outputs the reception contract information of the customer of broadcast of the above 1st. The reception contract information packet of the 1st broadcast is generated from the reception contract information of the customer of broadcast of the above 1st. The reception contract information packet of broadcast of the above 1st by which generation was carried out [ above-mentioned ] by decoding the reception contract information packet of broadcast of the above 2nd, and the 2nd carrying out reception contract information packet detection, The reception contract information packet of broadcast of the above 2nd by which detection was carried out [ above-mentioned ] is mixed. The reception contract information packet of broadcast of the above 1st and the reception contract information packet of broadcast of the above 2nd which were mixed are included in a packet stream. The 1st satellite of the above is minded. Delivery and the site of broadcast of the above 2nd Output the reception contract

information of the customer of broadcast of the above 2nd, and the reception contract information packet of the 2nd broadcast is generated from the reception contract information of the customer of broadcast of the above 2nd. The reception contract information packet of broadcast of the above 1st by which received the 1st above-mentioned broadcast, decoded the reception contract information packet of broadcast of the above 1st, and detected the 1st reception contract information packet, and generation was carried out [ above-mentioned ], The reception contract information packet of broadcast of the above 1st by which detection was carried out [ above-mentioned ] is mixed. The customer management method of the multi-channel broadcast characterized by including the reception contract information packet of broadcast of the above 2nd and the reception contract information packet of broadcast of the above 1st which were mixed in a packet stream, and making it send through the 2nd satellite of the above.

[Claim 14] While REPITO [ the site of broadcast of the above 1st / the reception contract information packet of broadcast of the above 1st ] REPITO [ the reception contract information packet of broadcast of the above 2nd by which detection was carried out / above-mentioned ] the site of broadcast of the above 2nd While REPITO [ the reception contract information packet of broadcast of the above 2nd ], the reception contract information packet of broadcast of the above 1st by which detection was carried out [ above-mentioned ], and it sets to the site of broadcast of the above 1st. Mix the reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 1st ] 1st, and the reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 1st ] 2nd, and it sets to the site of broadcast of the above 2nd. The customer management method of the multi-channel broadcast according to claim 13 characterized by mixing the reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 2nd ] 2nd, and the reception contract information packet of broadcast of the above [ REPITO / above / in the site of broadcast of the above 2nd ] 1st.

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[Translation done.]

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DESCRIPTION OF DRAWINGS

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[Brief Description of the Drawings]

[Drawing 1] It is the approximate line Fig. used for explanation of an example of the satellite broadcasting service system which can apply this invention.

[Drawing 2] It is the approximate line Fig. used for explanation of transmission of the EMM packet in an example of the satellite broadcasting service system which can apply this invention.

[Drawing 3] It is the block diagram of an example of the broadcast equipment in an example of the satellite broadcasting service system which can apply this invention.

[Drawing 4] It is the block diagram of an example of IRD in an example of the satellite broadcasting service system which can apply this invention.

[Drawing 5] It is the block diagram of an example of the viewing-and-listening managerial system which can apply this invention.

[Drawing 6] It is the block diagram of other examples of the viewing-and-listening managerial system which can apply this invention.

[Description of Notations]

1 ... the site of the 1st satellite operating company, and 2 ... the site of the 2nd satellite operating company, 3 and 4, and ... a satellite and 7 ... IRD and 24,124 ... a customer management system and 25 ... a customer viewing-and-listening authorization system and 153A- 153D and 253 ... an EMM mixer and 154 ... an EMM repeater

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[Translation done.]

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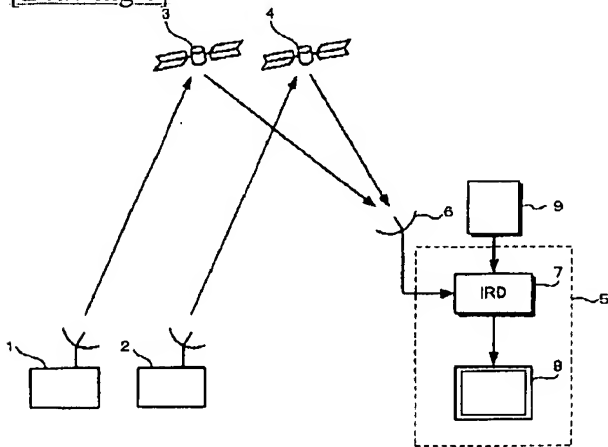
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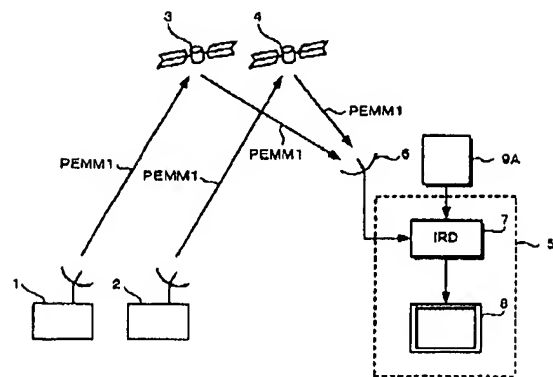
DRAWINGS

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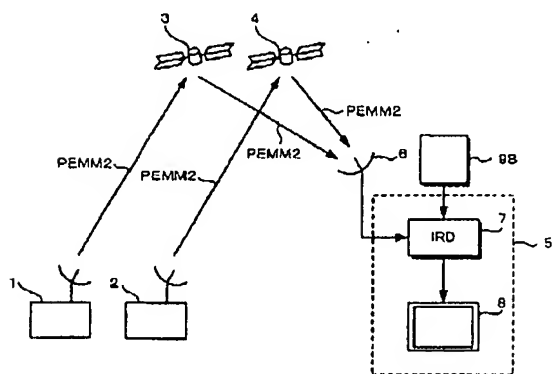
[Drawing 1]



[Drawing 2]

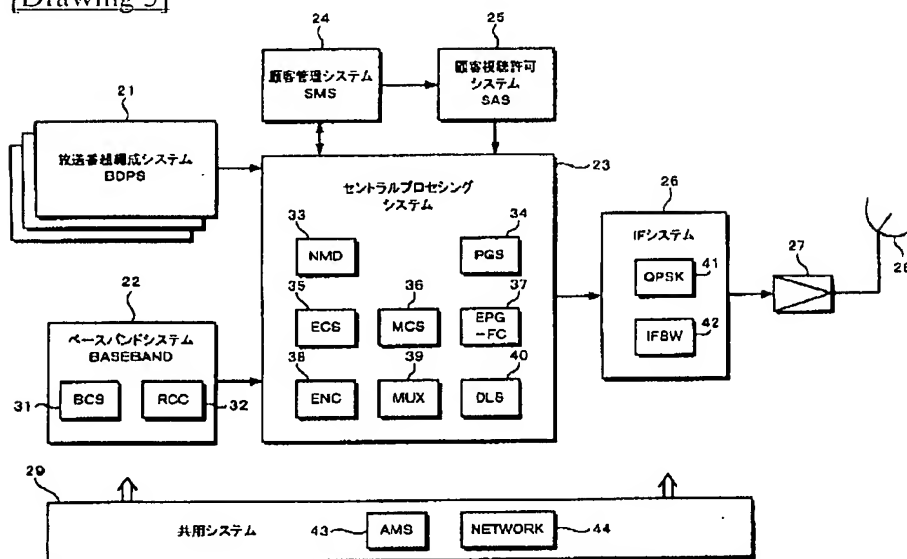


A

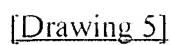


B

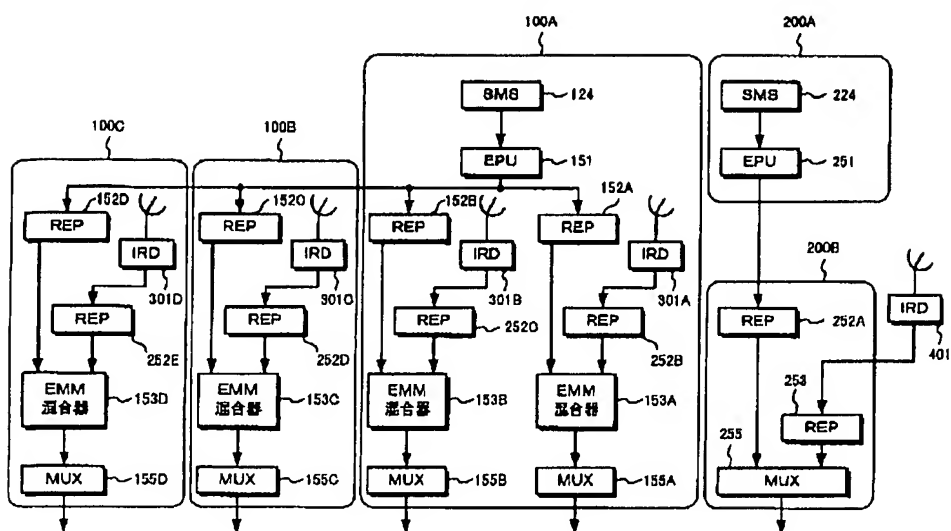
[Drawing 3]



[Drawing 4]







[Translation done.]